SANTA CRUZ BIOTECHNOLOGY, INC.

APMAP siRNA (m): sc-141869

BACKGROUND

APMAP (adipocyte plasma membrane associated protein), also known as BSCv or C20orf3, is a 416 amino acid single-pass type II membrane protein that is ubiquitously expressed in adult and embryonic tissues. During adipocyte differentiation, APMAP translocates from the endoplasmatic reticulum to the plasma membrane and is suggested to exhibit strong arylesterase activity. APMAP belongs to the strictosidine synthase family, exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 20p11.21. The gene encoding C20orf3 maps to human chromosome 20p13, which houses over 600 genes some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome. Additionally, chromosome 20 contains a region with numerous genes which are thought important for seminal production and may be potential targets for male contraception.

REFERENCES

1. Morita, M., et al. 2000. Genomic construct and mapping of the gene for CMAP (leukocystatin/cystatin F, CST7) and identification of a proximal novel gene, BSCv (C20orf3). Genomics 67: 87-91.
2. Albrektsen, T., et al. 2001. Identification of a novel integral plasma membrane protein induced during adipocyte differentiation. Biochem. J. 359: 393-402.
3. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608642. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Ilhan, A., et al. 2008. Localization and characterization of the novel protein encoded by C20orf3. Biochem. J. 414: 485-495.
5. Bogner-Strauss, J.G., et al. 2010. Reconstruction of gene association network reveals a transmembrane protein required for adipogenesis and targeted by PPARγ. Cell. Mol. Life Sci. 67: 4049-4064.
6. Mekenkamp, L.J., et al. 2013. Chromosome 20p11 gains are associated with liver-specific metastasis in patients with colorectal cancer. Gut 62: 94-101.

CHROMOSOMAL LOCATION

Genetic locus: Apmap (mouse) mapping to 2 G3.

PRODUCT

APMAP siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see APMAP shRNA Plasmid (m): sc-141869-SH and APMAP shRNA (m) Lentiviral Particles: sc-141869-V as alternate gene silencing products.

For independent verification of APMAP (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-141869A, sc-141869B and sc-141869C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

APMAP siRNA (m) is recommended for the inhibition of APMAP expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor APMAP gene expression knockdown using RT-PCR Primer: APMAP (m)-PR: sc-141869-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.